Author Disclosures: K. J. Cherry: Nothing to disclose; **R. Corpus**: Nothing to disclose; **T. Evans**: Nothing to disclose; **D. L. Gillespie**: Nothing to disclose; **T. Rasmussen**: Nothing to disclose.

SS27

Outcomes of 102 Patients Treated With Segmental Inferior Vena Cava Resection and Graft Replacement for Malignant Disease

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Objectives: To report early and late outcomes of segmental resection and graft replacement of the inferior vena cava (IVC) for malignant disease.

Methods: All patients who had IVC resection with graft reconstruction from 1990 to 2013 were reviewed. Patients with tangential excision and primary or patch venorrhaphy were excluded. End points were early (<30 days) mortality, major adverse events (MAE), graft-related complications, primary patency, and recurrence-free and overall survival.

Results: Among 2305 patients treated for retroperitoneal malignancy, 102 (50% male; age, 56 ± 15 years) had IVC resection and graft replacement (prosthetic in 100). Primary leiomyosarcoma occurred in 33 patients (32%) and other malignancies in 69 (68%; $P < .0001$). Preoperative performance status (Eastern Cooperative Oncology Group) was good or excellent in 92 patients (90%). Resection of multiple IVC segments was required in 59 patients (58%), 24 who needed renal vein reconstruction (24%) and two who had hepatic vein reimplantation. One patient died of intraoperative hemorrhage. Four others died ≤4 months, one procedure-related from duodenal leak and multisystem organ failure. Fifteen patients had MAE (15%), two graft-related. Over a mean follow-up of 56 months, seven patients had graft occlusion (6.9%). At 5-years, overall survival was 51% (range, 1-214 months), local recurrence-free survival was 66%, and disease-free survival was 35%. Four patients underwent graft-related reinterventions (4%). Kaplan-Meier estimates of IVC graft primary patency were 95%, 92%, and 92% at 1, 3, and 5 years, respectively.

Conclusions: IVC resection and graft replacement for malignant disease is safe, durable and provides excellent local control of the tumor in select patients.

Author Disclosures: T. C. Bower: Nothing to disclose; **S. Cha**: Nothing to disclose; **K. J. Cherry**: Nothing to disclose; **R. R. De Martino**: Nothing to disclose; **A. A. Duncan**: Nothing to disclose; **M. D. Fleming**: Nothing to disclose; **P. Gloviczki**: Nothing to disclose; **M. Kalra**: Nothing to disclose; **B. C. Mendes**: Nothing to disclose; **D. M. Nagorney**: Nothing to disclose; **G. S. Oderich**: Nothing to disclose; **B. J. Toomey**: Nothing to disclose.

C8a: Poster Session—Aortic Disease (1)

PS2

Type Ia Endoleaks Following Fenestrated and Branched Endografts May Lead to component instability and increased mortality

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Objectives: Fenestrated and branched endografts facilitate sealing in the visceral aorta to extend the landing zone for complex aneurysms. We describe the causes and implications of proximal endoleak in our experience.

Methods: All patients undergoing fenestrated/branched repair were entered onto a prospective database. Inclusion criteria necessitated the availability of at least one postoperative contrast computed tomography scan. Three-dimensional imaging was used to characterize morphology and correlated with outcome. Blinded assessors resized the repairs in the endoleak group to assess the change in practice from early repairs to current practice. Outcome measures were mortality and a composite of stent fracture, type III and Ic endoleak, as an indicator of device stability.

Results: Up to July 2013, 969 patients underwent fenestrated/branched repair. Emergency repairs (n = 24) and patients without requisite imaging (n = 21) were excluded, leaving 924 available for analysis. A type Ia endoleak was identified in 23 patients (2.5%). Landing zone choice was implicated as cause of endoleak development, because sealing in the visceral aorta was associated with endoleak development (52.2% vs 24.5%, $P = .006$). Aortic-related mortality was higher in the endoleak group, 30% vs 7% respectively ($P = .001$), and they experienced a higher incidence of component instability, 34.8 vs 9.5% ($P = .001$).

Conclusions: Fenestrated/branched endovascular repair has a low incidence of sealing zone failure despite the increased complexity. Choice of proximal landing zone may predict occurrence of endoleak. Development of a proximal endoleak seems to destabilize the repair and may lead to increased mortality.

Author Disclosures: S. Bathurst: Nothing to disclose; **J. Bena**: Nothing to disclose; **M. J. Eagleton**: Cook Medical and Bolton Medical, consulting fees or other remuneration (payment); **R. K. Greenberg**: Nothing to disclose; **Y. Kuramochi**: Nothing to disclose; **T. M. Mastracci**: Cook Medical, consulting fees or other remuneration (payment); **A. O'Callaghan**: Nothing to disclose.

PS4

Reintervention after abdominal aortic aneurysm repair in the Vascular Study Group of New England

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Objectives: Endovascular aneurysm repair (EVAR) has become the primary treatment for abdominal aortic